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EXAMINER

MANCHO, RONNIE M

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/889,391

Applicant(s)

KAMEYAMA ET AL.

Examiner

Ronnie Mancho

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38-41 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,10-27 and 30-37 is/are rejected.
- 7) ☒ Claim(s) 8,9,28 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 8, 9, are objected to because of the following informalities:

In amended claim 8, the applicant is advised to change “is respectively” to -- comprises at least one of a plurality of base stations respectively--. In addition, the applicant is advised to change “and are” to --, wherein said plurality of base stations are -- for clarity. This should help eliminate the error in claim 8 wherein a single base station was first claimed in claim 1 and later in claim 8, the single base station became a plurality. There was no adequate indication of a transition from a single base station to a plurality of base stations in claim 8. The applicant may also correct claim 8 by keeping it the way it is, but changing “a plurality of different stars” to -- each of a plurality of different stars --.

In claim 9, the applicant is advised to make a distinction between “a central base station is provided *among* the plurality of stars” and “said base station that is respectively provided *on* the plurality of stars” and the “base station” of claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b)

Art Unit: 3663

only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 1, 2, 4-6, 10-16, 19 rejected under 35 U.S.C. 102(e) as being anticipated by Zheng et al (6184816).

Regarding claim 1, Zheng et al disclose a flying object navigation system comprising:

a base station (ground station, col. 6, lines 13+; fig. 4A; col. 16, lines 30+) capable of storing information (database, col. 7, lines 55+) provided as common information for navigation of at least one flying object (aircraft) existing as a navigation object, said base station (ground station, col. 6, lines 13+) transmitting (fig. 4A; col. 16, lines 30+) to said flying object (aircraft) necessary data from said stored information for determining a course of action to be taken by said flying object (aircraft) on the basis of observation data from meteorological observation means 61 (fig. 4A; col. 16, lines 30-55) for observing the meteorology of a space region in which said flying object (aircraft) is flying, said base station transmitting said necessary data by using communication means (58, fig. 4A; col. 16, lines 30+) connected to said flying object (aircraft),

wherein said base station (ground station) has a memory (database, col. 7, lines 24-34, lines 55-67) for storing data sets comprising:

all observation data obtained by said flying object in the past through observation by said meteorological observation means 61 (fig. 4A; col. 16, lines 30-55);

records of courses of action (altitude of aircraft relative to hazardous weather, col. 17, lines 17-27; acceleration in relation to aircraft position, navigation data, other flight data, etc; col. 16, lines 3-55; col. 15, lines 57-67) taken by said flying object on the basis of the observation data: and

Art Unit: 3663

records of events (turbulence, winds, temperature, etc; col. 16, lines 3-55) encountered by said flying object as a result of the records of the courses of action (altitude, acceleration, navigation data, other flight data, etc; col. 16, lines 3-55; col. 15, lines 57-67);

wherein the course of action (flight path or position of aircraft) taken by said flying object is determined based on a prediction result (potential turbulence, etc; see Zheng, claim 1; abstract), the prediction result being based on the observation data obtained, the records of courses of action taken (altitude or flight path of aircraft taken relative to wind, temperature, hazardous weather; figs. 2G, 4A, 4C-F; col. 13, lines 6-34; col. 14, lines 1-5; 3-46; col. 17, lines 17-27) by said flying object and by prior flying objects (In fig. 4A, stored weather products, which include flight path i.e. courses of action taken by an aircraft relative to events encountered, are exchanged between different aircrafts through a base station) encountering the same observation data, and records of events encountered (winds, temperature, etc; col. 16, lines 3-55), which are stored as data sets in the memory of the base station.

Regarding claim 2, Zheng et al disclose the flying object navigation system according to claim 1, further comprising:

said flying object (aircraft, fig. 4A) having said meteorological observation means 10 (col. 16, lines 30+; col. 9, lines 63+), further includes;

transmitting means 58 (fig. 4A) for transmitting, to said base station, observation data obtained through observation by said meteorological observation means (col. 16, lines 3-55; col. 15, lines 57-67); and

Art Unit: 3663

receiving means 58 (fig. 4A) for receiving necessary data for determining a course of action to be taken, the necessary data being transmitted from said base station (ground station, fig. 4A; col. 16, lines 30+; col. 6, lines 13+) by using said communication means 58.

Regarding claim 4, Zheng et al disclose the flying object navigation system according to claim 1, wherein said base station (ground station) includes a data base (database, col. 7, lines 55+) which is constructed on the basis of the contents of said data sets stored in said memory and wherein observation data obtained through observation by said meteorological observation means 10, a course of action taken by said flying object after meteorological observation, and an event encountered by said flying object as a result of taking the course of action are related to each other (cols. 6-9, and 16).

Regarding claim 5, Zheng et al disclose the flying object navigation system according to claim 4, wherein said base station (ground station) comprises:

a receiving section for receiving, through said communication means 58 (col. 16, lines 30+), observation data obtained through observation by said meteorological observation means 10; a prediction section for predicting (forecasting, col. 6, lines 57+) the relationship between a course of action taken by said flying object and an event (CAT, col. 6, lines 13+) encountered by said flying object (aircraft) as a result of taking the course of action by making a search to ascertain which case in said data base (database, col. 7, lines 55+) the received observation data corresponds to (convective super cells, TNT, MWT, etc); and

a transmitting section (fig. 4A, col. 16, lines 30+) for transmitting a prediction result obtained by said prediction section (forecasting, col. 6, lines 57+) to said flying object (aircraft) through said communication means 58 (col. 16, lines 30+).

Art Unit: 3663

Regarding claim 6, Zheng et al disclose the flying object navigation system according to claim 5, wherein said base station (ground station) has a function of successively storing (database, col. 7, lines 55+), when data sets are newly formed, the new data sets on said memory, and a function of reconstructing (information updates, col. 8, line 7) said data base from the older data sets and the new data sets successively stored.

Regarding claim 10, Zheng et al disclose the flying object navigation system according to claim 1, wherein a plurality of base stations (ground stations 60, 61, fig. 4A; col. 16, lines 41+; also see col. 7, line 5) are provided on one star (i.e. earth. See specification page 7).

Regarding claim 11, Zheng et al disclose the flying object navigation system according to claim 10, wherein the plurality of said base stations (ground stations 60, 61, fig. 4A; col. 16, lines 41+; also see col. 7, line 5) provided on the one star (earth) are connected to each other through base station interconnection communication means (col. 16, lines 41+; fig. 4A), and that, every time a data base is reconstructed, data sets in the data base are transmitted between said base stations (ground stations 60, 61, fig. 4A; col. 16, lines 41+).

Regarding claim 12, Zheng et al disclose the flying object navigation system according to claim 1, wherein each of said base station and said flying object has an antenna, and each of said communication means and said base station interconnection communication means performs wireless communication (col. 8, lines 1+).

Regarding claim 13, Zheng et al disclose the flying object navigation system according to claim 1, wherein said flying object is an airplane.

Art Unit: 3663

Regarding claim 14, Zheng et al disclose the flying object navigation system according to claim 1, wherein said meteorological observation means 10 comprises an air turbulence observation apparatus (col. 9, lines 62+).

Regarding claim 15, Zheng et al disclose the flying object navigation system according to claim 1, wherein an event encountered by said flying object includes changes in wind velocity with time in vertical and/or horizontal directions acting on said flying object (CAT).

Regarding claim 16, Zheng et al inherently disclose the flying object navigation system according to claim 12, wherein said communication means for performing wireless communication uses light waves (i.e. one of high skill in the art knows that any wireless communication means, including light, available nowadays could be used; col. 8, lines 1-7).

Regarding claim 19, Zheng et al disclose the flying object navigation system according to claim 14, wherein said air turbulence detector comprises a laser radar air turbulence detector. Regarding claim 20, Zheng et al disclose the flying object navigation system according to claim 19, wherein said laser radar air turbulence detector has functions of transmitting laser light, receiving, as a received signal, scattered light caused by scattering of the laser light in the air, and observing the wind velocity from the Doppler effect in the received signal (col. 7, lines 2+; col. 11, lines 18+).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 3663

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7, 22-27, 30-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng et al (6184816) in view of Pendersen et al (6289331).

Regarding claim 7, Zheng et al disclose a flying object navigation system comprising:

a base station (ground station, col. 6, lines 13+; fig. 4A; col. 16, lines 30+) capable of storing information (database, col. 7, lines 55+) provided as common information for navigation of at least one flying object (aircraft) existing as a navigation object, said base station (ground station, col. 6, lines 13+) transmitting (fig. 4A; col. 16, lines 30+) to said flying object (aircraft) necessary data from said stored information for determining a course of action (altitude or flight path of aircraft taken relative to wind, temperature, hazardous weather; figs. 2G, 4A, 4C-F; col. 13, lines 6-34; col. 14, lines 1-5; 3-46; col. 17, lines 17-27) to be taken by said flying object (aircraft) on the basis of observation data from meteorological observation means 61 (fig. 4A; col. 16, lines 30-55) for observing the meteorology of a space region in which said flying object (aircraft) is flying, said base station transmitting said necessary data by using communication means (58, fig. 4A; col. 16, lines 30+) connected to said flying object (aircraft),

wherein said base station (ground station) transmits a signal for operating said flying object to control the operation of said flying object (col. 16, lines 30-45) based on the determined course of action (flight path of aircraft relative to weather conditions).

Zheng et al did not disclose remotely controlling a flying object. However Pedersen et al (abstract, figs. 1-5) disclose a base station (20, figs. 1 and 2; col. 7, lines 22-26) that transmits a signal for operating a flying object (11, 40; col. 7, lines 14-24, lines 41-67) to remotely control the operation of said flying object (col. 8, lines 7-61) based on a determined course of action

Art Unit: 3663

(GPS-based tracking, col. 7). Therefore, it would have been obvious to one of ordinary skill in the art of controlling flying objects at the time the invention was made to modify the Zheng et al device as taught by Pederson et al for the purpose optimizing an overall fire fighting effort, Pederson et al (col. 2).

Regarding claim 22, Zheng et al disclose a flying object having a navigation system comprising:

meteorological observation means for observing the meteorology of a space region in which said flying object is flying; and

flying object interconnection means provided in said flying object for interconnecting directly with a plurality of other flying objects, wherein information provided as common information for navigation of said flying objects is stored in each of said flying objects, and a course of action to be taken by each of said flying objects is determined on the basis of said information and observation data from said meteorological observation means.

Zheng et al did not disclose a direct communication between flying objects. However, Pederson et al (abstract; figs. 1-5; columns 2, 3, 7, 8) disclose a flying object interconnection means provided in said flying object for interconnecting directly with a plurality of other flying objects, wherein information provided as common information for navigation of said flying objects is stored in each of said flying objects, and a course of action to be taken by each of said flying objects is determined on the basis of said information and observation data from said meteorological observation means. Therefore, it would have been obvious to one of ordinary skill in the art of controlling flying objects at the time the invention was made to modify the

Art Unit: 3663

Zheng et al device as taught by Pederson et al for the purpose optimizing an overall fire fighting effort, Pederson et al (col. 2).

Regarding claim 23, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 22, wherein said meteorological observation means is mounted on said flying object.

Regarding claim 24, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 23, wherein said flying object has a memory for storing:

data sets constituted of all observation data obtained in the past through observation by said meteorological observation means mounted on said at least one flying object;

records of courses of action taken by said flying object on the basis of the observation data; and

records of events encountered by said flying object as a result of the records of the courses of action.

Regarding claim 25, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 24, wherein said flying object further comprises:

a data base which is constructed on the basis of the contents of said data sets stored on said memory, and wherein observation data obtained through observation by said meteorological observation means, a course of action taken by said flying object after meteorological observation, and an event encountered by said flying object as a result of taking the course of action are related to each other.

Regarding claim 26, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 25, wherein said flying object further comprises:

Art Unit: 3663

a prediction section for predicting the relationship between a course of action taken by said flying object and an event encountered by said flying object as a result of taking the course of action by making a search to ascertain which case in said data base the received observation data obtained through observation by said meteorological observation means corresponds to; and

a transmitting section for transmitting a prediction result obtained by said prediction section to another flying object through said flying object interconnection communication means.

Regarding claim 27, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 26, wherein said flying object includes a function of successively storing on said memory data sets, each of said memory data sets comprising:

observation data obtained through observation by said meteorological observation means mounted on said flying object or another flying object;

a record of a course of action taken by said flying object or the other flying object on the basis of the observation data;

an event actually encountered by said flying object or the other flying object as a result of the record of the course of action; and

a function of reconstructing said data base from updated data sets obtained by combining the older data sets and the new data sets successively stored.

Regarding claim 30, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 22, wherein said flying object has an antenna, and said flying object interconnection communication means performs wireless communication.

Regarding claim 31, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 22, wherein said flying object is an airplane.

Art Unit: 3663

Regarding claim 32, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 22, wherein said meteorological observation means comprises an air turbulence observation apparatus.

Regarding claim 33, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 32, wherein an event encountered by said flying object includes changes in wind velocity with time in vertical and horizontal directions acting on said flying object.

Regarding claim 34, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 32, wherein said flying object interconnection communication means for performing wireless communication uses light waves.

Regarding claim 35, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 32, wherein said air turbulence detector comprises a laser radar (see Lidar, fig. 1B, Zheng et al) air turbulence detector.

Regarding claim 36, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 35, wherein said laser radar (see Lidar, fig. 1B, Zheng et al) air turbulence detector has functions of transmitting laser light, receiving, as a received signal, scattered light caused by scattering of the laser light in the air, and observing the wind velocity from the Doppler effect in the received signal.

Regarding claim 37, Zheng et al in view of Pederson disclose the flying object having a navigation system according to claim 35, wherein said laser radar air turbulence detector has functions of transmitting laser light, receiving, as a received signal, scattered light caused by

Art Unit: 3663

scattering of the laser light in the air, and observing the density of air from the intensity of the received signal.

6. Claims 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng et al (6184816) in view of Small et al (5093563).

Regarding claim 17, Zheng et al disclose the flying object navigation system according to claim 12, wherein a plurality of said base stations (ground stations, col. 7, lines 5+) are provided on one star (i.e. earth, see specification, page 7, last paragraph), but did not mention an interconnection cable. However, Small et al (5093563) teaches of base stations connected by a base station interconnection cable 64 (fig. 3; col. 4, lines 60+; col. 12, lines 54+). Therefore, it would have been obvious to one of ordinary skill in the art of optically detecting turbulence to modify the Zheng et al device as taught by small et al for the purpose of recording more information than conventionally known, Small et al (col. 4, lines 50+).

Regarding claim 18, Small et al disclose the flying object navigation system according to claim 17, wherein said base station interconnection cable is formed of an optical fiber cable.

7. Claims 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng et al (6184816) in view of De Groot et al (6327039).

Regarding claim 21, Zheng et al (col. 7, lines 1+) disclose the flying object navigation system according to claim 19, characterized with a laser radar air turbulence detector. On the other hand, Zheng did not disclose how the laser radar works. However, De Groot et al teaches of a laser radar air turbulence detector characterized in that said laser radar air turbulence detector has functions of transmitting laser light, receiving, as a received signal, scattered light caused by scattering of the laser light in the air (col. 3, lines 55 to col. 4, lines 1+), and observing

Art Unit: 3663

the density of air (abstract; col. 6, lines 56 through col. 7, lines 1-14) from the intensity of the received signal. Therefore, it would have been obvious to one of ordinary skill in the art of meteorology to modify the Zheng et al device as taught by De Groot et al for the purpose of compensating for errors related to refractive index measurement brought about by turbulence, De Groot et al, abstract.

Allowable Subject Matter

8. Claims 38-41 are allowed.

9. The following is an examiner's statement of reasons for allowance:

In independent claims 38 and 40, the prior art does not disclose, "observation data is received by said database terminal directly from a plurality of flying objects".

Claims 39 and 41 are allowed for depending on allowed base claim.

10. Claims 8, 9, 28, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

In claims 8, 9, 28, 29, the prior art does not disclose base stations provided on different stars.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

Art Unit: 3663

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

12. Applicant's arguments filed 2-23-05 have been fully considered but they are not all persuasive.

The 112 rejections of the previous office action has been dropped, and the finality of the previous office action has been withdrawn.

In response to the arguments with reference to claims 1, the examiner disagrees with the applicant. Zheng et al (abstract on other sections mentioned above) disclose obtaining information based on a flying objects course of action (flight path) by that particular flying object. In particular, sensors onboard the flying object collect data about weather or turbulence in the flight path of the flying object warning the pilot of danger. In addition, Zheng disclose the course of action (flight path or position of aircraft) taken by said flying object is determined based on a prediction result (potential turbulence, etc; see Zheng, claim 1; abstract), the prediction result being based on the observation data obtained, the records of courses of action taken (altitude or flight path of aircraft taken relative to wind, temperature, hazardous weather; figs. 2G, 4A, 4C-F; col. 13, lines 6-34; col. 14, lines 1-5; 3-46; col. 17, lines 17-27) by said flying object and by prior flying objects (In fig. 4A, stored weather products, which include flight path i.e. courses of action taken by an aircraft relative to events encountered, are exchanged between different aircrafts through a base station) encountering the same observation data, and records of events encountered (winds, temperature, etc; col. 16, lines 3-55), which are stored as data sets in the memory of the base station.

Art Unit: 3663

Furthermore, Zheng (col. 10, lines 52+) disclose a directional scan sensor 16 to scan the atmosphere collecting meteorological data to steer the aircraft. The applicant's arguments are not directed to all the sections in Zheng cited by the examiner.

Zheng et al also disclose records of courses of action taken by prior flying objects (altitude or flight path of aircraft taken relative to wind, temperature, hazardous weather; figs. 2G, 4A, 4C-F; col. 13, lines 6-34; col. 14, lines 1-5; 3-46; col. 17, lines 17-27) encountering the same observational data. In fig. 4A Zheng teaches of the exchange of information between aircrafts through a ground station. The information of the flight path (course of action) taken by a first aircraft relative to weather conditions (events encountered) are stored in the ground station and also transmitted to other aircrafts.

As a matter of fact, when CAT is predicted from the weather data observed, the aircraft operation is provided so as to avoid areas of CAT (col. 6, lines 13-26). Without such data transmitted from the base station, the pilot cannot effectively control the flying object to avoid some potential dangerous hazards. Column 6, line 37 cites airborne radar used for sensing meteorological data for steering the plane.

The arguments with respect to claim 7 are moot in view of the new grounds of rejection initiated by the amendment "remotely". As already mentioned, the 112 rejection to claim 7 for "remotely" has been withdrawn.

Art Unit: 3663

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Communication

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 703-305-6318. The examiner can normally be reached on Mon-Thurs: 9-5.

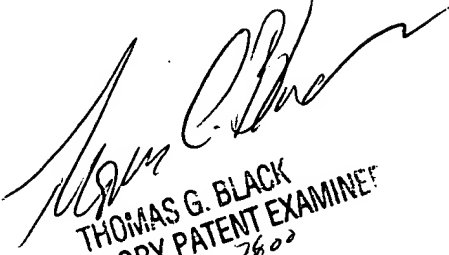
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Black can be reached on 703-303-8233. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Art Unit: 3663

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Ronnie Mancho
Examiner
Art Unit 3663

March 28, 2005



THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 3600